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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,269	04/18/2006	Yuzuru Sugano	Q94086	3633

23373 7590 04/01/2008

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EXAMINER	
TAYLOR II, JAMES W	

ART UNIT	PAPER NUMBER
4171	

MAIL DATE	DELIVERY MODE
04/01/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/576,269	SUGANO ET AL.	
	Examiner	Art Unit	
	James W. Taylor II	4171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/18/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3 and 5-10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10/543892. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application claims the polymeric particles within the claimed density and particle size range. All of the limitations of claims 1-3 and 5-10 are present in the claims of the copending application except the particle size limitation. However, there are particle size ranges

that are wholly within the claim 1's particle size and there are particle size ranges that completely encompass claim 1's particle size range. Therefore, the claimed particle size range would have been obvious.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Davies *et al.* (USP 4,177,253).

In claim 1 the applicant claims the following elements:

(i). a polyolefin (corresponding to "polyethylene, polypropylene," Davies *et al.*, col. 4, lines 33-34),

(ii). a magnetic material (corresponding to "magnetic coating," Davies *et al.*, col. 1, line 20), and

(iii). functional groups on the surface (corresponding to "amino acid," Davies *et al.*, col. 1, line 51-52).

The applicant also claims two physical property limitations:

(iv). an average particle size of 0.5 μm to 1000 μm (corresponding to "10^{-4} cm" to "1 cm"—which is equal to 1 μm to 10^{4} μm—Davies *et al.*, col. 10, line 65; col. 9, line 62), and

(v). substantially spherical particles having a density of 0.9 to 1.5 g/cc (Davies *et al.*, col. 1, lines 28, 31; col.4, line 66).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4-5, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies *et al.* as applied to claims 1-3 and 6 above with further obvious-type considerations.

Regarding claim 4, the applicant further claims the functionality is put on the surface of the particle by: (3) copolymerization of a comonomer into the main chains. Davies *et al*. has suggested that their monomer can be provided with "amino groups, hydroxyl groups, and carboxylic groups" (col. 6, lines 50-57). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used unsaturated carboxylic acid containing monomers (i.e., acrylic acid) as comonomers in the polymer cores made of olefinic materials so as to produce cores having carboxylic acid functionalized materials.

Regarding claim 5, it would have been obvious at the time of invention to modify Davies *et al.*'s average particle size to a narrower range to increase particle size monodispersity. The examiner notes that this range is still entirely within the range claimed by Davies *et al.* (col. 10, lines 65-66), but far more narrow.

Regarding claim 8, the applicant claims their magnetic material is superparamagnetic. Davies *et al*. fails to disclose superparamagnetic materials. (The examiner notes that although Davies *et al.* prefer nickel—which is ferromagnetic—they do not necessitate ferromagnetic magnetic materials.) As ferromagnetic, ferrimagnetic, paramagnetic, and superparamagnetic materials are mutually exhaustive of all magnetic materials, it would have been obvious for one with ordinary skill in the art at the time of invention to try substituting a soft magnetic material for a hard magnetic material. The examiner also notes that Davies *et al*. disclose (col. 5, line 7) "preferably the [magnetic] coating is not magnetized," which is a trait indicative of soft magnetic materials, especially superparamagnetic materials. The examiner feels this statement would give further motivation to try a superparamagnetic material.

Regarding claim 10, it would have been obvious at the time of the invention for one with ordinary skill in the art to change the thickness of the coating (and therefore the relative amount of magnetic material) to change the magnetic strength of the particle.

Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies *et al.* as applied to claims 1-3 and 6 above, and further in view of Goldman *et al.* (USP 4,097,392).

Davies *et al.* fails to teach using soft magnetic materials as their magnetic material.

Goldman *et al.* teach a method for manufacturing soft ferrite materials, including nickel-zinc ferrites and manganese-zinc ferrites (col. 10, lines 66-67), precipitated from an acidic aqueous phase. The ferrites could be precipitated and then used to coat the composition disclosed in Davies *et al.* instead of a nickel. It would have been obvious at the time of invention to one of ordinary skill in the art to replace the nickel ferromagnetic coating with a softer magnetic coating: either a nickel-zinc ferrite or manganese-zinc ferrite coating.

Conclusion

Select prior art is made of record and not relied upon but is considered pertinent to applicant's disclosure. Wang *et al.* (USP 5,395,688) presents a polystyrene system similar to the applicant's system. Although Wang *et al.* could potentially act as prior art via a 35 U.S.C. 103(a) obvious-type rejection, Wang *et al.* is currently not further considered due to more pertinent prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James W. Taylor II whose telephone number is (571)

270-5457. The examiner can normally be reached on 7:30 am to 5:00 pm (off every other Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 4174

James W Taylor II MSc
Patent Examiner
Art Unit 4171